Washington
Department of Wildlife
600 Capitol Way N
Olympia, WA 98501-1091

Pheasant and Farmland Wildlife Habitat Recovery Plan

Executive Summary

The Pheasant and Farmland Wildlife Recovery Plan is an innovative approach to reverse the alarming decline of Washington's farmland wildlife populations. An example of that decline occurred in the Columbia Basin Federal Irrigation Project. This agricultural area resulted from the construction of Grand Coulee Dam and subsequent diversion of water from the Columbia River south to the arid rangelands of central Washington. The development created a diversity of farmland wildlife.

As farming practices have become increasingly efficient, wildlife habitat has disappeared. For example, the Grant County pheasant harvest in 1963 was 134,000 birds. In 1988, that harvest count was approximately 23,000. A reduction of 111,000 birds within a 25-year period. One of the major reasons for the decline was the loss of small parcels of permanent habitat. These plots have been eliminated by practices known as "clean farming."

The recovery plan would provide for the acquisition of 8,000 acres in small, strategically located, permanent habitat plots (1-10 acres in size). These plots would be purchased throughout the Columbia Basin Project area and other agriculture lands of eastern Washington over a ten-year period.

An additional 2,000 acres of similar habitat and 4,000 acres of nesting cover would be leased through payments to land owners (landowner compensation). This provides complimentary, but short-term benefit. It could not be relied upon to insure continuing returns on the initial investment. The majority of the plots should be held in public ownership.

The cost to implement this program over a ten-year period would be approximately $25,500,000. This includes all associated costs.

The Pheasant and Farmland Wildlife Habitat Recovery Plan would:

- Increase pheasant and other wildlife populations.
- Realisticallly ensure the future of farmland wildlife.
- Increase wildlife-related recreational opportunities in eastern Washington.
- Reinforce economic activity in wildlife-related businesses and other services in rural communities and urban population centers.

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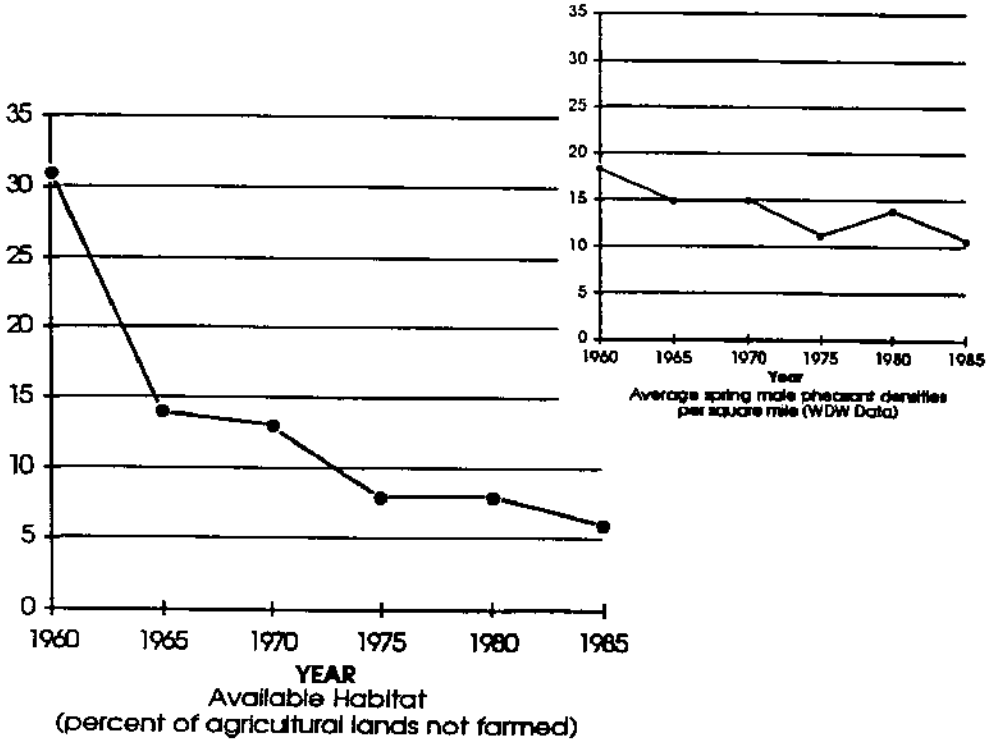
Historical Overview

During the late 1940s and into the 50s and 60s, the habitat base for pheasants declined because of changing agricultural practices in the dryland farming areas of Lincoln, Spokane and Whitman counties. Attention to that loss was temporarily diverted by the creation of excellent habitat and its corresponding high densities of pheasants in new federal irrigation projects in eastern Washington.

Pheasant populations boomed in response to these new agricultural developments. During the early to mid-1960s, these areas offered exceptional pheasant hunting opportunity. The Columbia Basin received national attention. In 1963, Grant County alone had a harvest of over 134,000 pheasants. That harvest exceeds the current eastern Washington total in 1988 by approximately 3,500 birds. Today Grant County's harvest has been reduced to 22,928 (1988 season).

As irrigated farming practices were modernized during the 1970s and 80s prime wildlife habitat disappeared. Population surveys and harvest data began to show a considerable decline in pheasant numbers (see *figure 1*). Simultaneously, the number of upland bird hunters began to dwindle. Since 1981, there has been a 52 percent decrease in eastern Washington upland bird hunting activities.

Figure 1 Comparison of Available Habitat to Average Male Pheasant Densities in the Columbia Basin Project of Central Washington 1960 - 1985



These declines were caused by the reduction in the amount, distribution and quality of permanent habitat. Modern agriculture, grazing and residential development have reduced this habitat to small isolated islands. Pheasant densities within the irrigated farmlands are now approaching levels similar to those that existed prior to irrigation development. It is evident that areas of clean farming are no more suitable for pheasants than arid rangelands.

Throughout North America, leases and agreements in conjunction with pheasant management historically have shown only short-term benefits. As a leased area reaches productive potential, changes in ownership, farming technology and crop prices often cause the land to be reclaimed for production. Deletion of the developed habitat generally follows. The resulting loss of time, money and effort would have not occurred if that land had been acquired outright.

This was vividly demonstrated in eastern Washington during the 1950s. A habitat enhancement program was initiated that provided multiflora rose stock and planting assistance to private landowners for the creation of permanent cover.

In theory the program was excellent, but unfortunately there was no control over the land where the rose was planted. Subsequently, very few, if any, of those original plantings still remain. That program had a ten-year budget of $250,000 dollars. Those public monies were essentially lost.

Management Principles

To understand management needs, one must first understand the following basic biological and management principles involved with the species.

1. **Annual Range** - In general, pheasants spend their entire life on an area approximately one square mile or 640 acres in size. This space is a definition of a pheasant's annual or home range. Although a pheasant's movements will sometime exceed these parameters, it is an exception rather than the rule. Therefore, visualize that a pheasant travels up to 1/2 mile in any direction from a given point where permanent cover exists.

2. **Permanent Cover** - Historically this type of habitat in pheasant range (i.e. cattails and willows, woody plantings, windbreaks) has been referred to as winter cover. This connotation is misleading as it indicates to most that pheasants use this cover only during the late fall and winter. It should be called retention cover.

3. **Retention Cover** - Retention cover is that permanent habitat which retains a population of pheasants within a specific square mile of land, thereby allowing the species to utilize the other habitat components that exist there. The best possible retention cover in the irrigated farmland of eastern Washington is cattail patches mixed with willow.

4. **Overlapping Populations** - Individual populations occur within each square mile as defined by the annual range. During the peak of pheasant production, which occurred in the 1960s, there were essentially hundreds of separate viable populations that overlapped, creating a larger overall population. Today, vast agricultural areas support only a limited number of pheasants and other farmland wildlife. A few sections of land with acceptable levels of retention cover still support acceptable densities. Unfortunately, they are scattered and isolated. This results in the fragmentation of populations and lack of genetic interchange. Presently,

there is a minimal number of these individual populations thereby reducing the overall population to a marginal level.

5. **Food, Water and Cover** - The availability and quality of these habitat components determine the success of any wildlife species. Food and water are still available in the farmlands of eastern Washington. Although the diversity of crops may have been reduced, there are still adequate crop residues to meet a pheasant's basic needs. On irrigated croplands water is readily available. The one component that has been severely reduced is the amount of permanent retention cover. That loss is primarily responsible for the severe reduction in pheasant numbers.

Need

Pheasants require permanent retention-type cover to sustain populations. Habitat in the form of cattails mixed with willows and other woody cover types within the irrigated farmlands of eastern Washington is essential. During the 1960s pheasant boom, this form of habitat was widely available. Farming practices then left many such rough areas untouched. Today, these types of areas are no longer present in any great quantity. To maintain and/or enhance pheasant populations for the future, management must be directed at creation and preservation of areas characterized by this cover type.

Objective

The aim of this program is to acquire and develop critical retention-type pheasant habitat in a strategic manner in the high density pheasant areas of eastern Washington. These include the Columbia Basin, Yakima area and portions of the central, eastern and southeastern counties. This would primarily be accomplished by fee title purchase with the assistance of landowner compensation, leases and agreements. Other management elements such as landowner compensation for nesting cover, roadway management, habitat enhancement and public access would be driven by and complementary to the acquisition and development stage.

Program Method

- **Permanent habitat plots** (1-10 acres in size), would be acquired and developed in close proximity to one another (1/2 - 1 mile apart). Areas already in the desired cover (cattails and willows) would be purchased to insure preservation of the local population.

- **Purchases in conjunction with existing habitat** should average approximately 20 acres per square mile. The preferred option would be to have five (5) plots totaling 20 acres within one square mile rather than one (1) plot equaling 20 acres. Strategic placement will maximize benefits per acre acquired plus generate species overlap and the creation of a larger population (see *figure 2*).

- **These areas will be surveyed, fenced and signed** to identify them to the public. Many of the sites would be scheduled for habitat improvements. Where feasible, plots would be allowed to reestablish naturally as in the case of cattail rejuvenation. Weed control would be performed on a continuing basis to minimize potential problems.

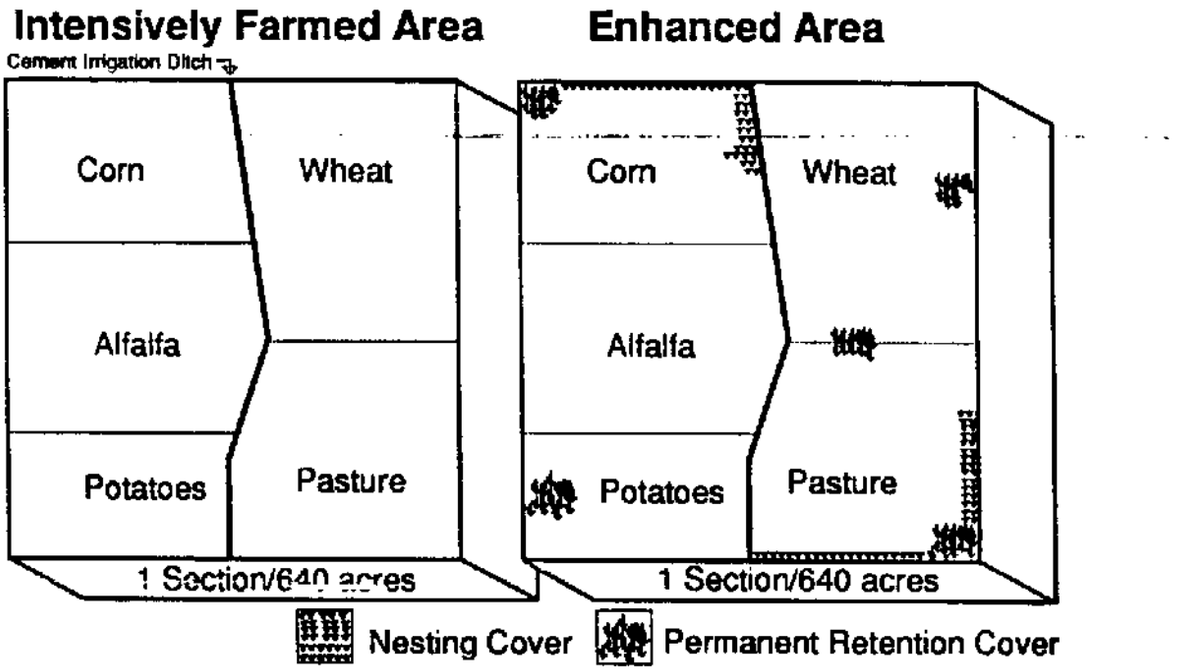
- **Population data would be collected** to measure population levels and response compared to adjacent areas deficient in habitat.

- **Landowner compensation payments would be used** to assist in reaching the average 20 acre retention cover quota per square mile. Compensation to create or leave nesting cover averaging 15 acres per square mile

would be based on the amount of permanent retention cover already present (see *figure 2*). Nesting cover is generally the most productive when it is in close proximity to permanent cover. Landowner compensation expenditures for nesting cover would not be authorized for areas deficient in retention cover (within 1/2 mile). Pheasants would not be present in sufficient numbers in these areas to utilize the enhanced component and therefore justify the expense.

• **Emphasis would be directed at the irrigated farmlands** of eastern Washington. Initially, efforts would be concentrated in Grant, Adams and Franklin counties within the Columbia Basin Project to maximize results. However, program dollars would be available for use in other eastern Washington farmland areas based on wildlife needs and land availability.

Figure 2



Costs

Overall program costs are reduced significantly by the amount of existing permanent cover already present in an area. For example, in the Columbia Basin Project there are numerous federal, and to a lesser degree, existing private lands that would suffice for all or part of the average 20 acre per square mile quota of retention cover. Mitigation measures (i.e., Grand Coulee) could further reduce total expenditures.

Additional staff are necessary for implementation of this plan. Landowner compensation contracts, fencing, signing and weed control on managed lands will require additional manpower. A minimum of two habitat development specialists in the program emphasis area of the Columbia Basin Project is required. This would add up to an additional $50,000 per new specialist annually including vehicle purchase. In addition, an administrative position is needed to coordinate and monitor the program to ensure consistency for maximum return on expenditures. The total of these costs would amount to $150,000 annually.

The primary elements and approximate annual costs involved in implementation of the program include the following:

• **Acquisition** - Fee title costs will average approximately $1,000 per acre for land suitable for conversion to retention cover.

• **Pre-acquisition Costs** - Appraisals, surveys, hazardous waste evaluations and recording costs will amount to approximately $700 per acre.

• **Development Costs** - Fencing, signing and plant materials where needed will cost approximately $1,100 per acre.

• **Landowner Compensation** - Efforts would be directed at establishment of retention cover with nesting cover as a secondary priority. Payments would average $30 an acre for permanent cover and $50 for nesting cover (annual cost).

• **Implementation and Management Costs** - Additional staff positions in the department's Wildlife Management Division that are required (2 field and 1 administrative) and equipment would add approximately $188 per acre annually.

Acquisition Costs Per Acre Total

Acquisition (Fee Title)	$1,000
Pre-acquisition Costs (Administrative)	$700
Development Costs	$1,100
Sub Total	**$2,800**

Operation and Maintenance

Implementation & Management Costs	**$188**

Total Costs Per Acre **$2,988**

Total Annual Acquisition and Maintenance Costs

Acquisition costs for retention cover averaging 800 acres per year	**$2,390,400**

Annual Landowner Compensation Costs

Landowner compensation for retention cover averaging 200 acres per year	$6,000
Landowner compensation for nesting cover averaging 400 acres per year	$20,000
Total	**$26,000**

Average Annual Inflation

Inflation costs are compounded at 5% annually over the program term (10 years)	
Total	**$133,223**

Annual Cost Total **$2,549,623**

These costs can be utilized in calculating various levels of plan implementation over a 10-year period.

Pheasant/Farmland Habitat Program Implementation Costs

Plan Implementation Level	Total # Acres of Acquisition and Landowner Comp. for Retention Cover 1 yr	10 yrs	Total # Acres of Landowner Comp. for Nesting Cover 1yr	10 yrs	Minimum # of Total Farmland Acres Benefited 1 yr	10 yrs.	Annual Cost	Total Cost
50%	500	5,000	200	2,000	16,000	160,000	$1,274,817	$12,748,170
75%	750	7,500	300	3,000	24,000	240,000	$1,912,225	$19,122,250
100%	1,000	10,000	400	4,000	32,000	320,000	$2,549,623	$25,496,230

Expected Benefits or Results

• **Acquisition and development** of plots in strategic locations within an area will provide the habitat necessary to sustain and enlarge pheasant populations. Without such a program, populations will continue to decrease, providing little recreational opportunity in the future.

• **All wildlife common to the project areas would benefit.** Many other wildlife species associated with farmlands are also dependent on this type of permanent cover. This program would allow for the enhancement and diversification of nongame wildlife in these areas.

• **It will take 1-3 years** after development before a noticeable response from farmland wildlife will be evident.

• **Public hunting and wildlife viewing areas** would be available through creation of these plots. This would spread hunting pressure, thereby relieving farmer/sports enthusiast's conflicts. Potentially it would also satisfy a portion of the increasing demand statewide for opportunity to experience wildlife in a non-consumptive manner on a year-round basis.

• **Washington wildlife sports enthusiasts** will support this type of habitat enhancement program. Money contributed to the state's economy by pheasant and farmland wildlife-related activities would expand greatly.

• **Increases in revenue to farmland communities** would occur as additional recreational opportunities would be available in these areas.

Summary

Pheasant populations as we know them today cannot sustain themselves in the future given the rapid advances in agricultural technology. During the 50s, 60s and early 70s, farmers produced pheasants as a by-product associated with their farming methods. That methodology has advanced to the point where a conscious management effort will have to be made to retain this resource.

In the past, pheasant management programs have relied on agreements with the private landowner. This type of management has shown only short-term benefits and has not reversed the downward trend of habitat loss. To effectively manage pheasant populations and farmland wildlife, the basis for any habitat development program must be public ownership and control.

Management must now actively seek a means of replacing farmland wildlife that has been and will continue to be lost. This program not only provides that means but also the additional hunting and viewing areas necessary to meet future public demands. To be effective, contemporary resource managers must evaluate the past, enhance the present and ensure the future.